THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CIRBA INC. (d/b/a/ DENSIFY) and CIRBA IP, INC., Plaintiffs, v. VMWARE, INC., Defendant.	Civil Action No. 1:19-cv-00742-LPS **REDACTED - PUBLIC VERSION** **JURY TRIAL DEMANDED**

DENSIFY'S PRE-HEARING BRIEF IN SUPPORT OF ITS MOTION FOR PRELIMINARY INJUNCTION

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases **Page(s)**

Other Authorities

Cirba Inc. (d/b/a Densify) and Cirba IP, Inc. (collectively, "Densify") hereby respectfully submit this Pre-Hearing Brief in Support of their Motion for Preliminary Injunction. The evidence unearthed during expedited discovery is even worse than Densify imagined. In short, VMware, Inc. ("VMware") [redacted]

I. VMware Needed Densify's Valuable, Innovative, And Patented Technology.

Densify's business was built on a key technological innovation: the placement of VMs on hosts (i.e., "host-based placement") based on business, technical, and workload constraints. Hillier Decl., D.I. 14, ¶¶ 14-16. [redacted]

These features were the driving force behind Densify's sales and awards, and its key differentiator in the market.[1] Hillier Decl., D.I. 14, ¶¶ 32-36, 108; Lee Decl., Exs. 24-26. Even

[1] It is beyond question that Densify's product practices its patent. Supplemental Declaration of

[redacted]

Dr. Vijay Madisetti ("MSD"), ¶¶ 79-83.

[redacted]

II. VMware Needed Densify's Technology Because It Did Not Have It Already.

VMware now argues that it had Densify's technology all along — i.e., the patent was anticipated by VMware's DRS 2006 product.[2] This litigation argument contradicts the record. [redacted]. Notably, Ms. Ji (a named inventor of the Ji patent), coauthored a 2012 paper acknowledging VMware did not previously have the accused technology. MSD, ¶ 106.

A. "Maintenance Mode" And "Resource Pools" Are Not "Business Constraints."

VMware contorts the term "business" to argue that two non-business features meet the claimed business constraint limitations. The first feature is "maintenance mode," which forces all VMs off a host so that maintenance can be performed on that machine. MSD, ¶ 111. This is a technical constraint by its very nature, not a business constraint. *Id.* Being in "maintenance mode" is a property of a host, not VMs, so it also does not meet the claim language of evaluating VMs using rule sets pertaining to business constraints. *Id.*

Dr. Nieh argues that the '687 patent's reference to "maintenance windows" is the same as DRS 2006's "maintenance mode." A maintenance window is a predetermined time period when maintenance can be performed i.e., a decision made by choice without interfering in operations of the business, *e.g.*, in the middle of the night. MSD, ¶ 110. Thus, the '687 patent's reference to

[2] VMware relies on the DRS technology in its VirtualCenter 2 application ("DRS 2006") as its only anticipation argument. (D.I. 48, at 9.) This sole anticipation position hinges on attorney argument and citations to a single, unauthenticated document Dr. Nieh found via Archive.org (*i.e.*, the Wayback Machine) – which is remarkable considering VMware has all of the information regarding its own product. (MSD, ¶ 88.)

maintenance windows, and evaluating VM placements based on them, is wholly different in nature than putting a host in maintenance mode and is a capability that DRS 2006 did not have.

The second feature VMware identified is "resource pools." This feature enables administrators to define quantities of resources in a virtualized environment (*i.e.*, CPU and memory) and allocate them to different groups of VMs. MSD, ¶ 103. Similar to maintenance mode, resource pools are not a business constraint, and cannot be used to define which VMs should be placed on which hosts. MSD, ¶¶ 102-104. Indeed, VMware admits that resource pools are designed to free VMs from being tied to a specific host, when the very point of the patent is host-based placement. D.I. 50 (Nieh Decl. Ex. 32 at 2 ("Virtual machines operating within a resource pool are not tied to the particular physical server on which they are running at any given point in time.")). VMware also attempts to characterize a parameter called "resource shares" as a business constraint. But resource shares, which determine the amount of resources VMs get relative to other VMs, are also squarely within the ambit of workload constraints, and lack VM to host evaluations. Indeed, VMware relies on resource shares as meeting the workload constraints limitations. D.I. 50 (Nieh Decl. ¶¶ 165-166). The same parameter, performing the same function, cannot meet both the business and workload constraints limitations.

B. "VMotion Requirements" Do Not Meet the Technical Constraints Claim Limitations.

Hosts within a cluster can be made to meet certain "VMotion requirements," such as shared storage, processor compatibility, and network configuration. MSD, ¶ 105. If these requirements are met by all the hosts within a cluster, then DRS can move VMs between hosts in that cluster and be assured of technical compatibility. *Id.* This is not an example of host-based technical constraints, as VMware asserts — it is the opposite: it obviates the need to perform technical checks when moving VMs among hosts within a cluster because the hosts are technically

indistinguishable. *Id.*

C. Ji in View of Raman Does Not Render the PI Claims Obvious.

VMware asserts that one of its own patents, U.S. Patent No. 8,667,500 ("Ji"), in view of a 2003 article unrelated to virtualization ("Raman") renders the claims obvious. But Ji has the same deficiencies as DRS 2006 and actually teaches away from the claimed solution. MSD, ¶¶ 119-33. Ji, like DRS 2006, does not describe the claimed business or technical constraints. Ji mentions software licensing, but instead of using it as a constraint, teaches away by describing balancing across all hosts. MSD, ¶ 123. And while Ji describes resource pools, it does so merely as a tool to manage resources, i.e., for workload reasons. MSD, ¶¶ 122-27. As for technical constraints, VMware claims Ji checks for compatible "architecture," but the term is not defined and the timing of any checks is unknown. *Id.*, ¶¶ 121, 126. Raman is of no help, as it does not describe virtualized environments, much less the claimed optimization techniques. Instead, Raman uses a one-off matchmaking process where the requirements for a job are checked against the capabilities of computers. MSD, ¶¶ 125, 128. Dr. Nieh argues one of the requirements for the job can be the ability to run a particular piece of software but requiring a particular software license to be present for a job to run is not a business constraint. *Id.*

There is no evidence that Ji and Raman would be combined, and objective indicia of nonobviousness weigh against their combination. MSD, ¶¶ 119-37. VMware spent years copying Densify's patented features, and the Densify product's commercial success, awards, investment, and accolades reflect the non-obviousness of the patent. Hillier Decl., D.I. 14, ¶¶ 35-36.

III. VMware Decided to Build Densify's Patented Product Itself.

[redacted]

[redacted]

A. VMware Committed Direct Infringement.

VMware initially argues that vROps alone does not infringe, because it is separate from the rest of the VMware software platform it controls and interoperates with, DRS. VMware's artificial "line-drawing" exercise serves only to highlight the ways in which vROps meets each claim element based on VMware's own evidence. DRS and relevant DRS components and functions are a part of vROps 7.0/7.5 based on VMware's own public representations. MSD, ¶¶ 14-18. [redacted]

VMware's technical arguments focus on two limitations it claims are missing: [7a] and [7b]. Prof. Madisetti details the failings in each VMware's non-infringement points. MSD, ¶¶ 19-72. He shows with VMware's own documents how vROps v7, and more generally VMware's software, meets these limitations exactly. Most importantly, VMware's materials demonstrate that it evaluates "each" of the "plurality of virtual machines" against "each" relevant host and against other virtual machines. MSD, ¶¶ 19-27, 49-72. VMware's positions are contradicted by its own documents and common sense. *See, e.g.*, MSD Ex. 4 at DSY00005090 (vROps "uses vSphere DRS rules that you define in vCenter Server to help determine good placement decisions for your virtual machines in the move VM action."). vROps gathers information about the VMs, and then uses that information to move the VMs to optimize the system by comparing VMs to each other and hosts, exactly what it told the public its software does.

B. VMware Also Has Committed Indirect Infringement of Claims 2 and 7.

VMware also induces infringement by its customers by promoting the infringing

capabilities to the public as "GREAT" and [redacted] MSD, ¶¶ 74-76. VMware's contorted argument that inducement requires proof that for "each customer virtual machine, VMware induced its customers to add: (1) tags using vROps . . .and (2) affinity rules . . . " is nonsensical, as the claims do not require every machine to be tagged. For contributory infringement, VMware argues that non-infringing uses for tags and affinity rules and for vROps v.7 bar a contributory infringement claim, misconstruing the scope of infringement. vROps's infringing capabilities are not limited to "tags and affinity rules." MSD, ¶ 78. The use of vROps to optimize systems using the claimed technology is extensive across its substantive features and use cases. *Id.* There is only one meaningful use of host-based placement based on technical, business, and workload constraints: infringement. VMware built infringing technology, instructs customers on how to use it to infringe, and the only significant use of it is infringement.

IV. VMware's Own Documents Underscore Irreparable Harm.

[redacted]

[redacted]

In all events, that VMware claims it is difficult to tell [redacted] And if, as VMware suggests, [redacted] then enjoining v7's infringing features will not harm VMware's sales.

VMware also asserts that its earlier v6.7 had the infringing features, and so there is no need to preliminarily enjoin v7. [redacted]

The information above shows that, contrary to VMware's argument, there is a nexus between the infringing features in v7 and the harm to Densify, based on the [redacted]. VMware's heavy promotion of v7's infringing features

[redacted] and threatens irreparable harm. [redacted]

[redacted]

V. VMware Has Alleged At Most Minimal Harm From a Preliminary Injunction.

[redacted]

Whatever marginal harm VMware alleges can be protected with a bond. "[T]he amount of the bond is left to the discretion of the court." *Frank's GMC Truck Center, Inc. v. General Motors Corp.*, 847 F.2d 100, 103 (3d Cir.1988); *see* Fed. R. Civ. P. 65(c). In setting the amount, the Court should consider the harm to the defendant from the preliminary injunction as well as the plaintiff's ability to pay. *See The Research Found. of State Univ. of N.Y. v. Mylan Pharm. Inc.*, 723 F. Supp. 2d 638, 664 (D. Del. 2010). Here, VMware could not articulate *any* harm to it from preliminarily enjoining the accused features, [redacted]

[redacted]

VI. Conclusion

Densify respectfully requests the Court grant its Motion for a Preliminary Injunction.

---

[3] VMware's arguments regarding delay ignore its own statements as to the importance of vROps v7. Densify was long worried about VMware's infringement, but only decided to sue and seek a preliminary injunction when vROps v7 suddenly made its infringing technology commercially viable and threatened irreparable harm. [redacted] As Densify explained, these prior makeshift solutions were technically unworkable and not a commercial threat. Hillier Decl., D.I. 14, ¶¶ 90-92; Lee Decl., Exs. 31, 87, 88.

Dated: July 24, 2019

Respectfully submitted,

/s/ Kenneth L. Dorsney

Kenneth L. Dorsney (#3726)
kdorsney@morrisjames.com
Morris James LLP
500 Delaware Avenue, Suite 1500
Wilmington, DE 19801
Telephone: (302) 888-6800

Sarah O. Jorgensen (*pro hac vice*)
sjorgensen@reichmanjorgensen.com
Reichman Jorgensen LLP
1201 West Peachtree, Suite 2300
Atlanta, GA 30309
Telephone: (650) 623-1403
Telecopier: (650) 623-1449

Christine E. Lehman (*pro hac vice*)
clehman@reichmanjorgensen.com
Reichman Jorgensen LLP
1615 M Street, NW, Suite 300
Washington, DC 20036
Telephone: (202) 894-7311
Telecopier: (650) 623-1449

Jaime F. Cardenas-Navia (*pro hac vice*)
jcardenas-navia@reichmanjorgensen.com
Wesley L. White (*pro hac vice*)
wwhite@reichmanjorgensen.com
Reichman Jorgensen LLP
100 Park Avenue, Suite 1600
New York, NY 10017
Telephone: (646) 921-1474
Telecopier: (650) 623-1449

Courtland L. Reichman (*pro hac vice*)
creichman@reichmanjorgensen.com
Shawna Ballard (*pro hac vice*)
sballard@reichmanjorgsensen.com
Jennifer P. Estremera (*pro hac vice*)
jestremera@reichmanjorgensen.com
Phillip J. Lee (*pro hac vice*)
plee@reichmanjorgensen.com
Joachim B. Steinberg (*pro hac vice*)
jsteinberg@reichmanjorgensen.com
Michael G. Flanigan (*pro hac vice*)
mflanigan@reichmanjorgensen.com
Kate Falkenstien (*pro hac vice*)
kfalkenstien@reichmanjorgensen.com
Reichman Jorgensen LLP
303 Twin Dolphin Drive, Suite 600
Redwood Shores, CA 94065
Telephone: (650) 623-1401
Telecopier: (650) 623-1449

Gary J. Toman *(pro hac vice)*
GToman@wwhgd.com
Weinberg Wheeler Hudgins Gunn & Dial
3344 Peachtree Road NE, Suite 2400
Atlanta, GA 30326
Telephone: (404) 876-2700
Telecopier: (404) 875-9433

ATTORNEYS FOR PLAINTIFFS CIRBA, INC. and CIRBA IP, INC.